Attributes that impact on the Satisfaction of Customers of Technical Services of Vehicle Dealers in Brazilian Federal District

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Background: The technical assistance services of car dealerships have been increasingly demanded about customer satisfaction, being one of the decisive factors in the decision to purchase vehicles. Objective: This work aimed to identify the attributes that impact on the satisfaction of the technical assistance clients of the Brazilian Federal District car dealerships and to know how these attributes impact on the additional satisfaction gain. These objectives will be fulfilled through a qualitative study, identifying the attributes, and a quantitative study in which the Competitive Analysis of the Improvement Gaps (Kano, 1984) was applied, classifying the attributes as obligatory, indifferent, attractive and unidimensional. Results: the research results showed that the one-dimensional attributes are related mainly to price, deadline and to the structure of the car dealership, being necessary the investment in employees, comfort and convenience to provide a high performance and to meet the expectations of the customers. Required attributes are related to more technical activities, usually developed by consultants, such as knowledge and vehicle inspection. In this case, the organization must provide an expected level of performance so that it does not generate customer dissatisfaction. Lastly, the attractive attributes, proximity of the car dealership and alternative working hours, can represent a differential of the company in the service rendering. Conclusion: the research could identify factors that contribute to the satisfaction of car dealership clients through empirical research in the Brazilian Federal District, increasing the knowledge of customer satisfaction for future work.

Key words: Satisfaction. Attribute. Car dealership. Brazil.

INTRODUCTION

According to data from IBGE-Cidades, the Federal District presented, in 2015, an average of 0.40 cars per inhabitant, 66% higher than the national average. Faced with this concentration of vehicles, the demand for after-sales services in the sector increases, especially through technical assistance.

In general, the auto industry consists of three components: a) manufacturers of auto parts and other raw materials; B) vehicle assemblers; and C) distributors. In these last ones, there are the car dealerships with the attribution of car sales, part sales and after-sales service, especially those of technical assistance (maintenance of vehicles performed in the taller (Guajardo et al., 2015).

One of the key factors in the decision to buy a vehicle is the after-sales service offered by the automakers through the car dealership (Guajardo et al., 2015). According to Olivier (2015), the satisfaction of the customer with the after-sales services must be intensified and will increasingly represent a discriminating factor in the motivation to purchase. Researchers such as de Guajardo et al. (2015), Garcia-Madariaga and Rodríguez-Rivera (2017), Pulles et al. (2016); Tontini and Sant'ana (2007), Martillia and James (1977) and Kano (1984) associate customer satisfaction with the performance of attributes of the product or service. The activities of the car dealerships (or vehicle local distribution), acting according to the needs of the customers, would play a much more important role in the process of buying a vehicle.

Considering the relevance of technical assistance services to the automotive industry, it is expected that an improvement in the services provided as a means of differentiation between competitors will be achieved. In this line, this study verifies which are the attributes that impact the satisfaction of the customers of technical assistance services of vehicle dealers in the Brazilian Federal District. Studying the Brazilian car dealerships also becomes significant for future research because it considers local factors not observed in other studies. Also, most customer satisfaction surveys study developed markets in the U.S., UK and Canada (Guajardo et al., 2015).

For this, a multi-method study was carried out that allowed to classify, from the Competitive Analysis of Improvement Gaps, the attributes (required, indifferent, attractive and one-dimensional) that impact customer satisfaction considering the provision of technical services in vehicle dealerships (Tontini and Sant'ana, 2007).

Customer Satisfaction:

The offer of services differs from the offering of goods due to its own characteristics such as: variability (Vargo and Lusch, 2004), inseparability, perishability (Kotler and Keller, 2012) and intangibility (Grönroos, 1978). This last aspect deserves to be highlighted as one of the most vital characteristics for the planning of service marketing, that is, the purchase of something non-physical.

Thus, Oliver (1999) emphasizes that the degree of intangibility of the product or service would be related to the form of customer satisfaction measurement, being this factor something to be considered in the elaboration of satisfaction measurement strategies. Satisfaction is the response to customer contentment, the
judgment that a characteristic of the product or service, or the product or service itself, offered (or is offering) a pleasurable level of contentment relative to consumption.

According to Oliver (1999), satisfaction is a necessary step towards customer retention and loyalty formation, which may emerge from the combination of perceived superiority in business supply. Zeithaml et al. (1996) have found strong evidence that the quality of a product or service has an impact on the behavioral consequences of individuals (favorable or unfavorable to the company), and that increased quality leads to customer retention and increased in the financial return of the companies. In addition, other studies have shown that the increase in the perceived performance of products and services is associated with an increase in satisfaction (Parasuraman et al., 1988; Cronin and Taylor, 1992).

Some models relate product performance and consumer satisfaction, such as: (a) matrix of importance and performance (Martilla and James, 1977); (b) Kano model of attractive and obligatory quality (Kano, 1984) and; the model of the Improvement Gaps (Tontini and Sant’ana, 2007). The Matrix of Importance and Performance proposed by Martilla and James (1977) seeks to show which attributes should be improved to make a product or service more competitive. For this, a matrix is constructed in which the importance is shown by the y-axis and the performance of the attribute by the x-axis. Therefore, attributes of high importance and high performance, low importance and low performance, low performance and low priority and low performance and high importance are related.

However, this more classical model assumes that the relationship between attribute performance and satisfaction is linear, which can lead to mistaken decisions when deciding which attributes are critical and what actions should be taken to increase customer satisfaction (Huuskesen and Pirttila, 1998).

In this perspective, a model was developed that overcomes the limitations of the matrix to classify and propose managerial improvements denominated Kano Model of Attractive and Mandatory Quality (Kano, 1984). The Kano Model of Attractive and Compulsory Quality (Kano, 1984) was inspired by the notion brought by Herzberg (1959), which treats satisfaction as a two-dimensional construct. It means that factors can cause satisfaction or dissatisfaction independently, that is, an attribute can cause satisfaction when served and not necessarily cause dissatisfaction when not attended, or, cause dissatisfaction when not met and not necessarily cause satisfaction when attended, as well as hygienic factors cited by Herzberg et al. (1959).

The Kano model evaluates the attributes of the product or service through so-called functional and dysfunctional questions. According to Kano (1984) and Matzler et al. (2004), the questions seek to assess customer satisfaction with attribute performance by asking (two questions, with mutually exclusive response options, for each attribute. In this way, the performance with the presence and non-presence of a given attribute would be evaluated through the answers that are associated with a value scale. The average of the functional questions (presence of the attribute) and dysfunctional questions (not presence of the attribute) would show how much the sample evaluates its satisfaction in relation to the attribute when attended and not attended. These values serve as a basis for classifying attributes as required, one-dimensional, attractive, indifferent, and reverse. With the results, Kano (1984) classifies the attributes as below:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Characteristic</th>
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<tbody>
<tr>
<td>Required</td>
<td>If they are not present or their performance is insufficient, customers will be extremely dissatisfied. On the other hand, if they are present or have sufficient performance, they do not bring satisfaction</td>
</tr>
<tr>
<td>One-dimensional</td>
<td>They bring satisfaction proportionally to the level of performance, that is, the higher the level of performance, the greater the customer satisfaction</td>
</tr>
<tr>
<td>Attractive</td>
<td>Those who when they have high performance will bring superior satisfaction, but do not bring dissatisfaction when not attended</td>
</tr>
<tr>
<td>Indifferent</td>
<td>Do not cause customer satisfaction or dissatisfaction</td>
</tr>
</tbody>
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Source: adapted from Kano (1984)

The Kano model was studied by Ting and Chen (2002) who could prove the asymmetrical relationship between the performance of supermarket attributes and customer satisfaction. Zhang et al. (2017) also relied on the Kano model to analyze the quality of library services. However, Tontini and Sant’ana (2007) warn that the model fails because it does not consider the current level of performance of the attributes of a given product or service that are offered by the market and, thus, limitation as a driver of improvements.

Tontini and Sant’ana (2007) propose that, based on the functional and dysfunctional questions of Kano (1984), the averages with superior and inferior performance of each attribute are calculated. The average with superior performance is called Kano+ and the means with inferior performance is called Kano-. Then, by calculating the Kano+ and Kano- averages for each attribute, questions are asked to consumers regarding the last consumption experience they had for each attribute to obtain current market performance.

The performance of the competitors will be compared with the Kano+ and Kano averages, thus, the satisfaction gap, that is, the gain or loss in customer satisfaction in relation to a change in the performance of an attribute (Tontini and Sant’ana, 2007). The gaps are calculated by subtracting the value of the functional and dysfunctional averages (Kano+ and Kano-) by the average of the market performance.

Tontini and Sant’ana (2007) have perfected the above model to use negative gap values equal to the Kano- mean value, that is, there is no subtraction by the market average, with the negative gap equal to the Kano-absolute value. In order to group the attributes according to the classification proposed by the Kano model, it is necessary to establish symmetrical neutrality lines in relation to the gap 0. These lines represent that above there was a substantial increase in the satisfaction or dissatisfaction of the attribute according to its performance. Attributes whose positive and negative gaps lie within the neutrality lines are considered neutral. This model was called Improvement Gaps.

Therefore, the conceptual model that will be used in this article uses the functional and dysfunctional questions of Kano (1984) that evaluate the impact of attribute performance on customer satisfaction or dissatisfaction - it is an imaginary situation until then. It follows, according to the methodology proposed by Tontini and Sant’ana (2007), the evaluation of a consumption experience in which one can measure the current performance of the market. Finally, the functional and dysfunctional averages are compared with the current market performance, resulting in the Satisfaction Gaps.

Methodology:

The research was multimethods, since it involved a qualitative study, which served as the basis for the formulation of a questionnaire for the quantitative application (Malhotra, 2009). The qualitative research was carried out by in-depth interviews, through an interview script (Kvale, 1996). For the construction of the script, it was observed the operation of car dealership, conversations with professionals of the sector and surveys of satisfaction of assemblers. According to Spradley (2016), during the interviews participants were encouraged to give more details about their perceptions.

After todas as entrevistas, as declarações foram sintetizadas conforme o diagrama de afinidades de Mizuno (1988), no qual as declarações são sintetizadas e fundidas de acordo com afinidade semântica e intuitiva, e não há classificação prévia racional, ou seja, as categorias que emergem das declarações não seguem uma lógica pré-concebida (Tontini and Sant’ana, 2007).

After all the interviews, the statements were grouped according to the Mizuno affinity diagram (1988), in which the statements are synthesized and merged according to semantic and intuitive affinity, and there is no prior rational classification, that is, the categories that emerge of declarations do not follow a preconceived logic (Tontini and Sant’ana, 2007). The statements synthesized served to define the attributes that represent them:

The questionnaire was drawn from the 17 selected attributes and was applied via the internet in the Google Docs platform. The criterion for being able to respond to the survey was to have attended a car dealership at least once in the last year. 89 questionnaires were answered, totaling an average of 5.23 questionnaires answered by the researched attribute, accepting the suggestion of Pasquali (2009), of 5 questionnaires per researched item.
The questionnaire was divided into three blocks of questions according to the model proposed by Tontini and Sant’ana (2007). In the first and second blocks, satisfaction is evaluated according to the Kano model of attractive and obligatory quality (Kano, 1984). For this, the respondents evaluated their satisfaction in imaginary situations of sufficiency, Kano+, (block 1) and insufficiency of attributes, Kano- (block 2). The questionnaires used the Likert 9-point scale from -4 to +4 (extremely dissatisfied to extremely satisfied). The questions were randomly distributed to avoid symmetry in responses. In the third block of questions, the respondents only assessed their overall satisfaction with the technical services of the concessionaire they are using, using the same scale as the previous blocks, and requested some demographic data.

The questionnaires were processed according to the model of Competitive Analysis of the Improvement Gaps and improvement gaps suggested by Tontini and Sant’ana (2007). That is, we calculated: (a) the means Kano + and Kano-, blocks 1 and 2 of the questionnaire; (b) The average performance of the attributes in the market, block 3 of the questionnaire; (c) the positive gap, which is the average Kano + subtracted from the market average; (d) the negative gap, equal to the Kano- mean. Afterwards, the attributes were classified as one-dimensional, obligatory, attractive and indifferent due to their impacts on consumer satisfaction, according to Kano (1984).

RESULTS AND DISCUSSION

Identification of attributes:

In descriptive statistics, the age group from 21 to 29 years old had the highest participation rate (71%), followed by the age group from 40 to 45 years old, with 11% participation. As to sex, 54% of the participants declared themselves to be male.

The quantitative study was processed according to the model of Competitive Analysis of Improvement Gaps (Tontini and Sant’ana, 2007; Kano, 1984), following the procedure described by the authors. Calculations of the Kano +/Kano- averages and the value of the average relative to market performance for each attribute were performed. As suggested by Tontini and Sant’ana (2007), the Kano + values are subtracted from the market average, finding the positive gap value and the kano- values considered as negative gap. The value of +1.5 was assigned to the neutrality zone of the positive gap and the value -1.5 as neutrality zone of the negative gap. The values were plotted on the graph and the analysis was performed to classify the attributes according to the model Kano (1984).
One-Dimensional attribute:
The one-dimensional attributes present values of gap+ and gap− that surpass the Zone of Neutrality. It means that they offer increased satisfaction when offered and dissatisfaction when not offered (Tontini and Sant’ana, 2007). As One-Dimensional, the following attributes were assigned: (3) Vehicle Return Term, (6) Realization of All Services, (7) Delivery Deadline, (9) Estimated Price, (10) (11) Waiting Room, (13) Anomaly Solution, (14) Immediate Service, (16) Cheap Price and (17) Documentation.

These attributes are correctly measurable by the matrix of importance and performance, since the sufficiency and insufficiency behavior causes proportional impact to satisfaction and dissatisfaction, respectively (Tontini and Sant’ana, 2007; Olivier, 2015). The one-dimensional are related mainly to price, term and to the own structure of the car dealership, demonstrating the constant need of investments in employees, comfort and convenience (Tontini and Sant’ana, 2007). It should be emphasized that the degree of consumer expectation can influence satisfaction (Olivier, 2015; Agnihotri et al., 2016).

The attributes related to deadline - 3, 7 - presented similar results to the conclusions of Haidri et al. (2017) where the deadline directly influences customer satisfaction. The same occurs in the attributes related to the price - 9, 16 - and company’s structure - 10, 11, 14 and 17 - (Hill and Brierley, 2017).

Attributes related to the price, deadline and structure of the company are able to accommodate diverse expectations and are subject to a subjective analysis of the clients since they are not directly related to the product target of the service, the car, except for the attributes (6) Realization of all the services and (13) Anomaly Solution. Tontini and Sant’ana (2007) suggest that these attributes are the investment target for high performance and the investment should be focused on meeting the expectations that customers develop before going to the car dealership.

Required attribute:

The attributes classified as required were: (1) Consultant’s Attendance, (2) Consultant’s Knowledge, (5) Vehicle Inspection, (8) Vehicle Cleaning and (12) Service Scheduling. These attributes are considered as prerequisites by the costumer, behaving like a two-dimensional construct, in that they cause dissatisfaction when not served, but do not offer additional satisfaction when taken care of (Olivier, 2015). Tontini and Sant’ana (2007) are in favor of maintaining the required attributes at a reasonable level of performance, since their high performance will not bring additional satisfaction.

Olivier (2015) argues that managers should seek both to maximize satisfaction and minimize dissatisfaction, which can be achieved by correctly targeting managerial actions.

The attributes listed as mandatory are related to the activities developed or under the responsibility of the consultant who started this work as well as the qualitative research), demonstrating the importance of this professional’s assignments to maintain the general level of satisfaction, mainly so that it does not contribute to the level of dissatisfaction (Tontini and Sant’ana, 2007; Olivier, 2015).

Thus, organizations should avoid excessive efforts in attributes that will not bring increased satisfaction and prioritize those that are paramount for the permanence of customers (Péret et al., 2017).

Attractive attribute:
The attractive attributes have characteristics of a two-dimensional construct, since only their presence can generate satisfaction, not impacting the dissatisfaction when not attended. The attributes classified as attractive were: (4) Car dealership proximity and (15) Alternative business hours.

In an individual analysis, it is verified that the attribute (4) Car dealership proximity presented a gap+ very close to the neutrality zone, suggesting a behavior close to that of a required attribute. In common one realizes that the two mentioned attributes can be considered innovators.

The proximity of the concessionaire can be innovative, since in the Brazilian Federal District, the car dealerships are largely located in an Industry Sector, a non-residential zone, and that only in the last few years are some utilities emerging outside this zone. With the value of the gap+ near the neutrality zone this factor can be a differential and object of analysis in later studies (Olivier, 2015). Woler (2018) emphasizes that physical proximity to service delivery with consumers can mean an increase in satisfaction and, consequently, better organizational performance.

The alternative working hours are also considered to be innovative because there were no concessionaires that could offer night hours, or on Saturdays after 2:00 pm. Haidri et al. (2017) and Olivier (2015) emphasize that the flexibilization of customer service schedules can generate more satisfaction.

Conclusion:
This research had as general objective to know which are the attributes that impact on the satisfaction of the customers of technical assistance services of vehicles dealers in the Federal District. In order to do this, a model was developed from the Competitive Analysis of Improvement Gaps (Kano, 1984), which, in addition to the classification of attributes developed by Tontini and Sant’ana (2007), considers the current performance of the market to be classified, offering results that guide improvement efforts. The attributes identified by the research were: Unidimensional, Attractive and Required.

The research obtained the results according to the classification indicated by the methodology. The one-dimensional attributes are related mainly to price, deadline and to the own structure of the car dealership, being necessary the investment in employees, comfort and convenience to provide a high performance and to satisfy the expectations of the clients. Required attributes are related to more technical activities, usually developed by consultants, such as knowledge and inspection of the vehicle. In this case, the organization must provide an expected level of performance so that it does not generate customer dissatisfaction. Lastly, the attractive attributes, proximity of the concessionaire and alternative working hours, can represent a differential of the company in the provision of the service.

Companies are being hit by competition never seen in previous decades (Kotler and Keller, 2012). Nevertheless, customer satisfaction has become one of the central objectives of service provider organizations. Satisfaction becomes an indicator that guides the business and has a competitive advantage over competitors. It is expected that satisfied customers will return more often and prefer the company that provided the service that satisfies them (Olivier, 2015).

In this sense, this research generates benefits so that the managers of car dealerships observe some factors that impact on customer satisfaction and assist in their decision on organizational structure. In addition, this paper benefits from the knowledge of customer satisfaction for future work, mainly in the service rendering sector, through an empirical analysis that clarifies the relationship between customers and service provided by the vehicle dealers in the Brazilian Federal District. It also broadens the geography of academic research in the area, given that most studies considered developed markets in the U.S., UK and Canada (Guajardo et al., 2015).

Some limitations appear as recommendations for future studies. It is firstly noted that the use of non-probabilistic sample is amenable to homogenization. It was observed that the sample obtained 71% of the participants in the age group of 21 to 29 years. Another limitation is that the questionnaires contain questions of required answers, which may generate trend in the research. The transversal character of the research is cited, applying exclusively to the moment and the sample. In addition, Kano (1984) had already emphasized that attributes change over time, such as the remote control of a television that was already an attractive attribute and would now be mandatory, emphasizing the need to follow the classification with time.

REFERENCES
References:


